

<b>DECLARATION UNDER RULE 132</b>	Application #	10/580,459
	Confirmation #	5519
	Filing Date	05/24/2006
	First Inventor	CAMINADE Anne-Marie
	Art Unit	1796
	Examiner	Dollinger, Michael M.
	Docket #	1004900-000277

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

I, Anne-Marie CAMINADE, residing at 17 rue de l'Estérel, 31400 Toulouse, France, declare and say that:

1. I am a French citizen.
2. I graduated from University Paul Sabatier, Toulouse, France, obtained a Ph.D. in Chemistry, in 1984 from University Paul Sabatier, Toulouse, France. I am a research scientist from the French Research Institute (CNRS) and the author of more than 285 scientific papers and inventor of 14 patent families.
3. I am an inventor of the above-identified application, and I am aware that the claims of the present patent application have been rejected under 35 U.S.C. 102(b) as being unpatentable over Killat et al. (US 4,871,779).
4. The above-identified application is directed to a dendrimer comprising:
  - (i) a central core,
  - (ii) generation chain(s),
  - (iii) an intermediate chain at the end of each generation chain, and
  - (iv) a terminal group at the end of each generation chain, said group comprising a bisphosphonic moiety.
5. The Examiner has taken the position that Killat et al. discloses a dendrimer comprising all the above features.

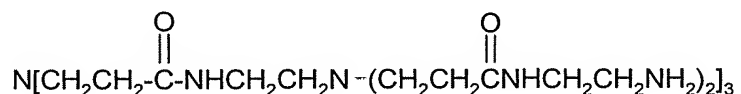
6. Killat et al. discloses in column 10 dendrimers merely comprising generation chains a and b, where a chains emanate from the core and two b chains are bound from each a

chain to a bisfunctional terminal group of formula:

$$\begin{array}{c} \text{YNH}_2 \\ \diagup \\ \text{N} \\ \diagdown \\ \text{YNH}_2 \end{array} \quad \text{or} \quad \begin{array}{c} \text{Z} \\ \diagup \\ \diagdown \\ \text{Z} \end{array} \quad (\text{see in Killat et al.: column 10}).$$

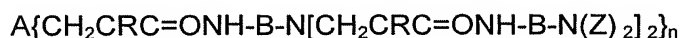
Such dendrimers thus do not comprise a single intermediate chain comprised between the last ordered generation chain (b chain) and the terminal group.

7. This is confirmed by the experimental procedures given in columns 13-14. The process disclosed in example 2 does not lead to a dendrimer comprising an intermediate chain. In fact, the dendrimer prepared in example 2 is of formula:



As apparent from this formula, said dendrimer only has identical generation chain and does not have a single intermediate chain at the end of each generation chain.

8. This is also confirmed by the general formula of the dendrimers referred to in claim 17:



Where Z is H or  $-\text{CH}_2\text{CRC}=\text{ONH-B-N}(\text{R1})_2$

and R1 is H or  $\text{CH}_2\text{CRC}=\text{ONH-B-N}(\text{Z})_2$

9. Therefore the dendrimers disclosed in Killat et al are merely made up from a central core, generation chains and terminal groups. They do not comprise an extra intermediate chain as required by the wording of the present claims.

10. Further, should it be considered that the ultimate generation chain could be considered as an intermediate chain, this would be inconsistent by the wording of the present claims as well, as set out bellow:

Should the last generation chain be considered as an intermediate chain, this would mean that two intermediate chains are in fact attached to the penultimate generation chain. This is excluded by the instant claims which provide that only one intermediate chain is attached to the generation chains.

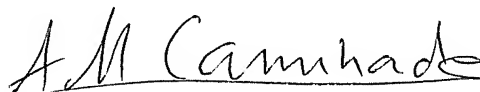
11. Further, the presence of the intermediate chain in the dendrimers of the invention is crucial in that intermediate chains may include functional moieties which allow the convenient attachment of diverse terminal groups. The intermediate chain of the invention thus allows flexibility.

12. As a result, the dendrimers of the invention are neither disclosed nor suggested by Killat et al.

13. The undersigned declares further that all statements made herein of her knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that wilful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of United States Code and that such wilful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signed this

6<sup>th</sup> day of May 2009

A handwritten signature in black ink, appearing to read "A. M. Caminade", written over a horizontal line.

Anne-Marie CAMINADE